



# citizens' bulletin

Volume 3

Number 10

June, 1976

\$2 per year

## Here it comes...

## OZONE SEASON

(p. 2)



### In this issue

Ozone Season.....	2
Bikecentennial Trail.....	5
Farmington Canal.....	7
Boating Safety.....	8
From the Field.....	10

Environmental Awards.....	11
Trailside Botanizing.....	12
PEP Talk.....	13
Conservation Commission Corner.....	13
D.E.P. Calendar.....	15



## Ozone Season: the Summer Smog

The first episode came early this year. On April 18, Easter Sunday, unusually bright sunlight and hot weather triggered reactions between nitrogen dioxide and auto-produced hydrocarbons in the air, forming photochemical oxidants exceeding the levels considered safe to human health. Sensing apparatus in Danbury first detected the rise in oxidant levels and relayed the information to a central computer in the DEP offices in Hartford, which rang an alarm and produced the following readout:

\*\*STAGE 2 ALERT DETECTED\*\*  
04/18/76 10:39 STATION: DANBURY  
03 READING: .111PPM (01HR AUG)  
NOTIFY DIRECTOR OF AIR COMPLIANCE

Air Compliance Director Henry Beal was in the office that day, having come to check on ozone levels during the unseasonably hot weather. Seeing the readout, he notified the newspaper wire services of the air pollution alert. People with respiratory conditions were advised to stay indoors and the general public was asked to use their cars as little as possible.

So began ozone season, the period from April 15 to October 15, when seasonal warm weather and bright sunlight catalyze nitrogen oxide and hydrocarbons to produce unhealthy levels of photochemical oxidants, or smog, on as many as one third of the summer days in Connecticut. Caused primarily by our continued dependence on the automobile, the phenomenon has "no short-term solution" according to Beal, "only long-term strategies."

Photochemical oxidants are a group of gaseous compounds, the most common of which is ozone. The reaction that produces ozone is a variation of one that commonly occurs between nitrogen dioxide, a gas produced by virtually every combustion source, and oxygen in the atmosphere. Under normal conditions, the two gases combine to form ozone which is usually an unstable and short-lived product. During the summer, however, car exhaust and intense sunlight prolong the "life" of the ozone in the atmosphere.

Car exhaust is estimated to produce about 70% of the hydrocarbon emissions in Connecticut, with the remaining 30% produced by industry. When added to the normal reaction, hydrocarbons upset its balance, and make the end product, ozone, unnaturally stable. The light and heat of the summer sun energize the reaction, causing it to occur faster and more frequently. The result is a seasonal rise in ozone, photochemical oxidants, or smog.

### Health Effects

These reactions become more than high school chemistry when one considers the effects they have on human health. A 1972 U. S. Department of Health, Education and Welfare report entitled "Effects of Air Pollution on Human Health" states that sustained high levels of ozone have caused "impaired performance" among student athletes and "reduce efficiency of the lung." Lower levels have caused eye, ear, nose and throat irritation and "increased frequency of asthmatic attacks," according to the report. The gas is also known to cause damage to

plants and promote the cracking of rubber.

The ozone problem in Connecticut was addressed more directly by Dr. Thomas Godar, President of the Connecticut Lung Association and Director of the Pulmonary Disease Section of St. Francis Hospital, Hartford, while speaking at a seminar on the effects of air pollution on human health. "The entire State of Connecticut has a serious problem with ozone," Godar said, "second only to Los Angeles."

Godar described a 1972 study in which rabbits were exposed for six days to ozone levels "slightly above the level experienced by several urban of Connecticut in the summer of 1974." The rabbits "developed classical emphysema, with damage to lung tissue and to blood vessels of the lung. The changes were similar to those experienced with human emphysema," he noted.

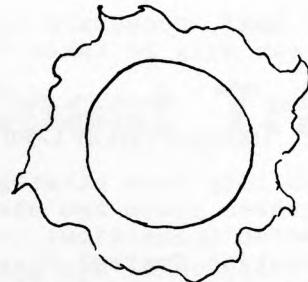
"Emphysema is the destruction of the lung tissue itself, affecting the exchange of oxygen and carbon dioxide," Godar said, "The destruction of tissue is permanent, and it is not replaced."

Although these effects are felt by everyone, they are felt more quickly and dramatically by people with respiratory disease, according to Godar. There are 250,000 respiratory patients in the state, he said, "and they are the barometers of air pollution. As surely as those of you who have arthritis know when a storm is approaching because your joints begin to bother you, so are they aware of weather changes and pollution changes...because their respiratory system is immediately affected. They are highly sensitive."

### Warning System

Respiratory patients and others now receive some warning of approaching pollution episodes on a daily basis from DEP's Air Quality Index and, on an emergency basis, from the DEP Air Pollution Alert. Such notices, according to Air Pollution Engineer Vic Yanosy, "let people know what the air conditions will be so they can gear their activities accordingly."

The daily Index measures the most prevalent air pollutants of the season: particulates and sulfur dioxide in the winter, particulates and ozone in the summer. Pollution levels are announced as "low," "moderate," "high," or "unhealthy," based on hourly ozone averages. An unhealthy forecast for ozone is 0.08 parts per million (ppm), which correlates with the Federal EPA levels set to protect human health. According



to Yanosy, Connecticut experienced "at least 85" such days last summer.

If levels climb above 0.2 ppm for a given hour an alarm sounds and the computer prints out notification of an air pollution alert. Respiratory patients are advised to stay inside and avoid strenuous exercise. The public is asked to use their cars as little as possible. In more serious cases all non-vital traffic may be curtailed, although no such cases have occurred in Connecticut. Last year eight automotive-related air pollution alerts were announced.

According to Yanosy, such periods can be predicted from the prevailing weather patterns. If such periods occur on weekends someone will be assigned to staff the computer room.

"Most alerts occur during periods of little cloud cover, temperatures over 86 degrees, and winds from the southwest 5 - 16 miles per hour," Yanosy said. Such conditions promote the ozone-producing reaction and "the southwest wind brings up the hydrocarbons from the New Jersey refineries and the urban centers of Washington, D. C., Philadelphia, New Jersey and New York.

"It's great weather, but some of our most beautiful days are the most unhealthy," he commented.

Though measures such as the Air Quality Index and Air Pollution Alert are effective as warning devices, they are essentially "passive" measures. That is, they notify people that a pollution incident has occurred but do nothing to prevent the incident. According to Air

(continued on next page)

—DEP Citizens' Bulletin—

Published monthly by the Department of Environmental Protection. Yearly subscriptions \$2.00. 2nd class postage paid at Hartford, Connecticut. Please forward any address change immediately. Bulletin material may be reprinted without permission provided credit is given, unless otherwise noted. Address all communications to the Editor, DEP Citizens' Bulletin, Hartford, Connecticut 06115.

Director Beal, necessary preventive actions can only be taken "over the long run."

### Transportation Control

Such long term strategies were ordered three years ago when the Federal EPA directed Connecticut to prepare a Transportation Control Plan to lower vehicular pollutants in the state. The idea was that the most effective way to control vehicular pollution was to reduce overall automobile use, or Vehicle Miles Travelled (VMT). Early this spring the Air Compliance Unit presented a plan to promote mass transit and discourage the use of private cars. Portions of the plan went to the Legislature and died there.

According to Principal Air Pollution Engineer John Gove, who supervised the drafting of the plan, the two most important components of the plan were the gasoline-powered Heavy Vehicle Retrofit and statewide Inspection/Maintenance programs. The heavy vehicle retrofit, Gove said, mandated that emission-control equipment be installed on all heavy vehicles such as trucks.

"At present there are no federal pollution control requirements on heavy gasoline-powered vehicles," Gove said. "The retrofit would have reduced hydrocarbon emissions by 75% on new trucks and 20% on those manufactured before 1974. New trucks should have been fitted with catalytic converters at a cost of about \$400 per vehicle. Older trucks, which do not accept converters, would have been fitted with lean carburetors or air bleeders for about \$100 per truck."

The retrofit measures did not make it through the House of Representatives' Transportation Committee. "Many members of the truck industry were opposed to

spending this much on emission control," Gove explained.

The Inspection/Maintenance program would have been a system of 23 inspection systems, set up to inspect private cars for emission performance. Each car was to be evaluated according to performance standards for its make and year.

"The inspections would have cost the car owner about \$6-\$7 per year," Gove said. "If the car failed inspection the most common form of corrective measure would have been a simple \$30-\$50 tune-up."

The bill for Inspection/Maintenance passed the Senate by a vote of 29-6, but was recommitted to the Transportation Committee of the House of Representatives two days before the end of the session. No action was taken on the measure, largely because there was a move in the Arizona legislature to disband a similar system already operating in that state. According to Gove, "we'll just have to put it in the hopper and try again next year."

Other officials see further significance in the defeat of the Inspection/Maintenance Bill.

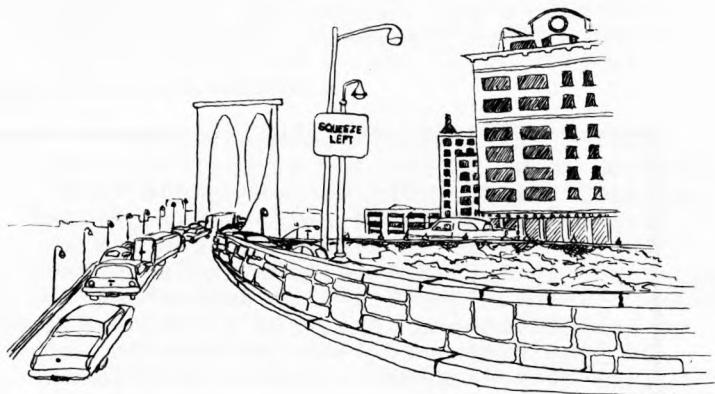
"Connecticut has historically had trepidations about mandatory auto inspection programs," commented Air Compliance Director Henry Beal. "The state had a mandatory inspection system for safety in the 1920's that failed. Since then the idea has been a skeleton in the closet."

"But the Arizona inspection program has recently been given a vote of support by the Arizona State Senate," he added, "and Rhode Island has recently mandated an inspection/maintenance system. So we're going to try again next year."

DEP Commissioner Gill saw the failure of the bill as a loss that might affect industry. The only alternative to transportation control, he said, would be to obtain greater cutbacks in the small industrial component of hydrocarbons.

"The burden of reducing Connecticut's high smog levels should be shared fairly by the motor vehicle operators," Gill said, "since they contribute significantly to its existence."

Voicing continued support of the bill, he said "without it, inequitable burdens must be placed on Connecticut businesses and industry to achieve necessary reductions in pollutant levels. This will also discourage new industries from locating within the state." Gill added that since automobiles are mostly res-



(continued on page 6)

# The Bikecentennial East Coast Trail



Stretching across 800 miles of back roads, the East Coast Bicycle Trail is a route between Boston, Massachusetts and Richmond, Virginia which will serve as a northeast spur of Bikecentennial's Cross-country bicycle trail. The route was developed from two years of extensive research by a small number of dedicated cyclists in eight northeast urban areas, and reflects a growing interest to develop the bicycle not as a toy but as a means of transportation and long distance touring throughout the United States.

Ed Hay of the Bureau of Outdoor Recreation in Philadelphia is the original motivating force behind the East Coast Bicycle Trail. Hay's inspiration for the East Coast route was the Bikecentennial '76 Trans-America trail, developed to lead 4,100 miles from Richmond, Virginia to Reed's Fort, Oregon. Bikecentennial plans to host 5,000 - 10,000 riders this summer on tours ranging from approximately 150 miles to 4,000 miles. Hay thought it would be appropriate to extend the eastern terminus of Bikecentennial '76 in Richmond, Virginia up the East Coast to link northeastern cyclists with this project.

About two years ago Hay began contacting bicycle clubs and interested cyclists in the urban areas of Washington, Baltimore, Wilmington, Philadelphia, Trenton, outer New York, Hartford and Boston, the Hudson Valley section, the Connecticut Valley section and the Massachusetts Bay section.

Coordinating the Connecticut section of the route were Bob Mauterstock of the Hartford Council of the American Youth Hostel and Charlie Samuels of the League of American Wheelmen. According to Mauterstock, several factors were taken into consideration in planning the route through Connecticut. "Firstly, the route had to be a safe one for cyclists," he said. "Secondly, we wanted to utilize as many rural byways as possible and still be accessible to interesting historical and geographical sights. Thirdly, that it be close to overnight facilities, restaurants and repair facilities that the long distance cyclist could take advantage of."

The Connecticut portion of the Bikecentennial route runs from east to west and links up with the Massachusetts section just north of Woodstock, Connecticut. From there it leads southwest through Brooklyn, Windham and Lebanon, west through Hebron, South Glastonbury, and across the ferry to Rocky Hill. Then it travels northwest through Wethersfield, Hartford, West Hartford and Farmington, and continues west through New Britain, Bristol, Terryville and Thomaston. Finally it runs northwest through Litchfield, Cornwall Center, Falls Village, and Lakeville into New York where it connects with the New York section in Millerton.

Mauterstock cycled the Connecticut section last summer and estimated it to be approximately 110 miles long. He described it as "a beautiful route, taking advantage of the rural beauty of the eastern part of the state, the historical sights of central Connecticut and the spectacular scenery of northwest Connecticut."

Since the initial planning for the route in Connecticut, representatives from each of the eight urban areas have met to coordinate the eight sections into one continuous trail. The East Coast Bicycle Congress was formed which, according to Mauterstock, "hopes to act like the Appalachian Trail Conference, in setting up the bicycle trail and continuing to maintain it."

But as Hay says, "This is just the beginning. What is needed now is the

(continued on next page)

development and refinement of the trail on a regional and local basis. Support facilities, such as signing, mapping, hostels and rail access are crucially needed so that the route's potential can be fully realized."

To further promote the route a guide book and detailed maps of the entire 800 miles will be released in early June. Information on side trails and spur roads connecting the Pennsylvania Dutch area, Long Island, the upper Connecticut Valley and Rhode Island will be included. This book will be available at \$4.95 a copy through local bicycle clubs, AYH Chapters and at most bike and book shops. Organizations and bike or book stores interested in bulk ordering 50 or more copies at a discount price should make inquiries to the East Coast Bicycle Congress, 5300 Akron Street, Philadelphia, Pennsylvania 19124.



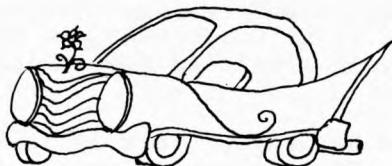
## Ozone Season

*(continued from p. 4)*

ponsible for the smog, trying to reduce it by tightening controls on industry "stands little chance of success."

Meanwhile, other measures have yielded small successes in shortening or eliminating ozone season. State-encouraged carpools in private industry still operate, but, according to Gove, "their popularity has decreased since the passing of the fuel crisis." He also notes that enclosing carpool applications with vehicle registration forms, a temporary program sponsored by a federal demonstration grant, will terminate in September.

In planning, DEP engineers currently work with the Department of Transportation and other transportation agencies to ensure that new transport plans are consistent with the goal of reducing vehicle-miles-travelled. Metropolitan transport plans funded by federal money are also reviewed by the DEP prior to receiving their federal grants.



Some control measures over the stationary source component of hydrocarbons have been effective, with "significant success" in controlling industrial hydrocarbon sources, according to Beal. Vapor recovery at gas stations and other gas-handling facilities was a section of the Transportation Control Plan not requiring legislative mandate (DEP has regulatory power over stationary sources of air pollution) and went through public hearings this spring. As written, the measure will require that all gas stations in the transportation control area install vapor recovery systems to prevent the loss of hydrocarbon vapors.

But the only way to effectively end the ozone problem is to lower the amount of automobile emissions, either from individual cars or from overall vehicle use. And to do that the only control we have in Connecticut is the federally mandated auto emission program that requires catalytic converters or devices delivering comparable performance on all new cars. Air Director Beal sees such devices as helpful but not sufficient.

"My appraisal is that the ozone levels in Connecticut will remain the same or perhaps be lowered slightly as old cars are replaced by new ones with emission control," Beal said. "But as for any significant progress, it's going to be a long haul."

And until then, every summer will be ozone season.

# The Farmington Canal: A Unique Restoration Opportunity

A defunct nineteenth century canal now presents a recreational and historical opportunity for the people of the state. This is the conclusion of a recently completed DEP study on the state's old Farmington Canal, a waterway that for twenty years carried people and goods between New Haven, Connecticut and North Hampton, Massachusetts. Prepared by DEP's Office of Planning and Coordination, the report, entitled The Farmington Canal: A Proposal for Selective Restoration, identifies about twelve miles of the canal route which may provide historical and recreational benefits in an area of the state undergoing rapid development.

According to the study, the original 80 mile canal was opened in 1828, conceived by New Haven business interests to draw commerce away from Hartford and the Connecticut River. Twenty years later, besieged by problems and outperformed by the new railroad, the canal was closed. During those twenty years the canal was plagued by difficulties ranging from insufficient funds for construction and repairs, to periodic closings due to freezing and drought, to leaks created by farmers who objected to the liberal rights of way claimed by the canal builders -- some chosen so recklessly that some farmers were cut off from their barns.

Now most of the canal route is unrecognizable as a waterway. Most of it looks like a swale or dip in the ground, or an old wagon path.

The DEP report traces the canal route and notes significant features such as locks, aqueducts, and culverts. Most of these features are either gone or unrecognizable. Local ordinances in the 1850's encouraged people to remove stone and building materials in payment for filling the canal back in at road crossings.

One man who has walked most of the 58 mile canal length in Connecticut is Mel Schneidermeyer, Deputy Commissioner of DEP's Environmental Quality Division. Schneidermeyer's interest in the Farmington Canal began with spare-time map research he did in 1972 when he was Director of the Central Connecticut Regional Planning Agency, research which eventually led to his forming, with Ruth

Hummel, Director of the Plainville Historical Society, the Farmington Canal Corridor Association. It was the Association that provided the impetus for towns along the canal route to restore or highlight portions of it in their town planning.

"We called together representatives from ten towns," Schneidermeyer recalls, "and planned a Farmington Canal Day to raise people's awareness about the canal." Held on September 30, 1974, the Day featured a high-wheeled bicycle ride and ceremonies along the canal route.

"A number of towns have made or changed plans to feature the canal," he said. "Plainville, for example, dug part of it out and made it part of the town park. Southington withdrew and revised plans for an industrial subdivision on the canal site. And Cheshire acquired and is restoring the only remaining complete lock and lock tender's house."

He also mentioned that years ago, before the Association was formed, the Town of Simsbury restored one of the major culverts on the canal. The DEP began its study of the canal before Deputy Commissioner Schneidermeyer was appointed to the Department.

(continued on page 9)



Typical 19th century canal scene.

**So you own a boat. Now,**

## **Chart a Course for Safety**

Boats have played an important part in Connecticut's history from the 1600's to the present and now seem to be as much a part of the summer scene as hotdogs and hamburgers. But this fascination for boats can lead you straight into trouble unless you learn to handle them with reasonable skill and care.

Anybody in Connecticut can buy a boat -- all it takes is money. You don't need a bit of knowledge about seamanship or boating safety but "common sense" dictates that you should obtain some training in the proper handling of your craft so as not to be a menace to yourself and everyone else on the water. Statistics show that less than 30% of the nation's boatmen have ever taken a course in seamanship and safe boat handling.

Connecticut is fortunate to have 30 U. S. Coast Guard Auxiliary (USCGA) flotillas and 20 U.S. Power Squadron (USPS), whose principle purpose is to teach new or inexperienced boat operators the principles of seamanship and safe boat handling.

These courses are offered at various locations throughout Connecticut and are free except for a small charge for course materials. The adult courses consist of 12, 2-hour lessons, covering the subjects of boat handling, equipment requirements,

by Frank Glista,  
DEP Boating and Hunter Safety  
Representative

rules of the road, navigational aids, charts and compass, weather and marlin-spike seamanship. In addition to these courses, the USCGA and USPS as well as many Municipal Police and recreation departments cooperate with DEP in providing the minimum 6 hours of instruction for youths under the age of 16, qualifying them for the boating safety certificate required of all "young skippers" for the solo operation of a motorboat.

The U. S. Coast Guard Auxiliary, whose membership is made up of experienced boat owners, also mounts safety patrols in Long Island Sound, effects search and rescue operations upon request of the USCG, maintains a communications network monitoring boat radio channels and, at the beginning of each boating season, inspects private craft for compliance with the state and federal equipment regulations. If your craft meets the legal requirements and has the additional recommended equipment, a Courtesy Motor-boat Examination Decal will be awarded and attached to the windshield signifying that you have properly outfitted your boat. These services, coupled with the value of property and lives saved, have resulted in millions of saved tax dollars.



The Department of Environmental Protection has available for the asking a self-study course in boating for those individuals who are unable to attend an instructor conducted course. In addition, the department provides boatmen with copies of boating laws in digest or complete form and a canoeing guide for those interested in this sport. For information on boating courses and for copies of Connecticut Better Boating write or call DEP, Information and Education Unit, State Office Building, Hartford, Connecticut 06115, telephone 566-3489.

#### SAFE BOATING WEEK - JULY 4-10

Each year the President of the United States and the governors of all the states designate the week in which the 4th of July occurs as National Safe Boating Week to emphasize the need for boating instruction and safe boat handling. This year Safe Boating Week takes on special significance. As a Bicentennial event, Long Island Sound and the adjoining waters will become the focal point of one of the greatest water spectacles in history, Operation Sail "76."

For the event, the maritime nations of the world will send their naval vessels, sail training vessels and hundreds of private yachts to the area to celebrate the Bicentennial. The July 4th parade of sailing vessels on the Hudson River is expected to be the largest assemblage of sailing vessels the world has witnessed and will result in a tremendous influx of out-of-state yachts and trailable boats. Connecticut boatmen are urged to show courtesy and exercise the good common sense they have demonstrated in the past to minimize the occurrence of boating accidents. Remember; safe boating is no accident.



## Canal

(continued from p.7)

Schneidermeyer points out that the short-lived canal was really not the boondoggle it seems to be in retrospect.

"The canal represented a significant advance in transportation technology," he commented. "Previously one team of horses could haul half a ton of material over the rough roads of the time. On the canal a team could haul 25 tons."

"The canal also made it easier to ship damageable goods," he said. "Thruways of the time were paths described as having tree stumps no higher than fifteen inches. Imagine trying to haul a clock out of Bristol on roads like that."

According to Schneidermeyer the canal failed for several reasons.

"The successful canals all had major resources such as coal, grain or iron. The canal through Connecticut shipped clocks, shingles and cheese, none of which were shipped in large enough volume to sustain profits.

"And finally there were the railroads -- many times more efficient than teams of horses pulling barges. The New Haven-Southampton railroad was the final blow."

Now defunct, this short-lived canal may be revived for recreational use. DEP's report identifies 12 miles with recreational potential -- 2.5 miles in Avon and Farmington, a one-mile stretch in Plainville and 8 miles in Cheshire and Hamden. According to the report's author, Planning Analyst Jonathan Clapp, "the Hamden segment offers the most promising potential as a car-free corridor linking schools, parks and other local and state facilities. There are also numerous other sections worth preserving for their value as wetlands or wildlife habitat.

"We've tried to present in this report the significance of the canal and the potential it offers," Clapp said. "We hope that communities will be able to follow with their own restoration and recreational efforts."

Copies of the study report are available from the Office of Planning and Coordination, Room 118, DEP.



## from the field

by Douglas Starr

### THE SWAMP

The shouts of the schoolchildren and noise of the highway faded as we glided out onto the swamp. By the time we paddled fifty yards all we could hear were the calls of the swampbirds and the scraping of the crickets.

I sat in the middle of a canoe paddled fore and aft by biologists Tom Smith and Tim Linkkila. The purpose of our visit was to band female wood ducks.

"The banding we're doing is part of an overall study by the U. S. Fish and Wildlife Service," Linkkila explained. "When a hunter recovers one of these ducks he sends the leg band to the Service in Washington, D. C. They send him a certificate of appreciation, notify us that the duck has been found and plot the results with the findings of other Atlantic Flyway states. It should give us a better idea of the changing migration patterns of the birds."

The brightly colored wood ducks were a prominent species in New England until they were sent into a period of decline in the early 1900's by market hunting, wetland filling and other human activities. The near final blow occurred in 1938, when the infamous hurricane of that year came through and knocked down most of the old trees that provided the remaining birds with nests. The species is generally thought to have been saved by the New England-wide nesting box programs, in which thousands of specially-designed wooden nesting boxes were erected in swamps and ponds. The ducks we were banding represented only a small portion of those living in the more than 3,000 nesting boxes throughout the state.

As we headed toward the first brown box we passed a mute swan patrolling back and forth in front of its nest. Contrary to what we're told in fairy tales, real-life swans can be dangerous if approached. We passed within twenty yards of this one and he craned his neck and hissed.

"Belligerent," Linkkila said. "Any closer and he'll become cantankerous." We paddled on.

We approached the first wood duck box from behind. The female was there. Smith stood in the bow of the canoe and, before she could move, quickly grabbed her. Holding her by the base of the wings, he slipped a U-shaped aluminum tag around her leg and bent it into a ring. Then he placed her back in the box. Biologists have to be careful in the banding operation since excessive disturbance can cause the female to abandon her nest. This duck was disturbed by the activity and a second later stuck her head out again, ready to fly away.

"She's nervous," Smith said. "If a female's been chased out of a nest before, she'll be very high strung."

He stuffed a shirt into the opening of the box to confine the duck till she calmed down. We would circle back later to retrieve the shirt.

Studies such as the one we were doing provide valuable information about the life cycle of the ducks. "For example," Linkkila said, "we now know that female wood ducks return to nest in the areas in which they were born. Males from other parts of the country pair with them down south and follow them back to the new nesting site. This geographical mixing prevents genetic inbreeding among the birds."

The noises of the swamp grew louder as we paddled in from the road. Catbirds and warblers called. Cattail and pickerel weed crowded the sides of the canoe and we had to push off the bottom and rock the boat to move ahead. Two dark mallards flurried off from a clump of sedge. We pulled up beside another wooden house, fastened to a tree, three feet above the waterline.

"Raccoon," Smith said as he looked into the empty box. "If you see shell fragments or dried membrane then you know there was a hatch. But there's nothing here but old nesting material. And the raccoon hairs around the entrance give the culprit away."

"Ol' Ricky Raccoon," Linkkila mused.

Two other nesting boxes we found contained membrane and egg fragments, indicating hatch offs. Another showed signs of predation. Two more that were accessible earlier in the spring were now impossible to reach. Vegetation had grown closely around them.

"Though banding is a standard management technique, banding success is only about ten per cent," Linkkila commented. "We may band eighty birds and get only three returns. And of the returns only some are really useful. A bird that's shot in November tells us less about migratory destinations than one taken say, from the Deep South in January. By that time we know where the duck stayed for the winter."

We headed back to retrieve Tim's shirt. We were in an area of heavy vegetation and had to do considerable pushing and rocking to get through. A log blocked our way and we had to turn the canoe sideways and push the log under us to get by. A chorus of bullfrog calls reached us and passed, like the roar of a motor boat.

"Brake," Smith ordered. "I see something."

The two men backpaddled to stop the canoe. Peering over the side, Smith splashed his hand down and came up with a monster--a dripping fifteen pound snapping turtle that writhed and spat as Smith held onto its tail.



Banding the female woodduck.

"I've caught them up to forty pounds," Smith said. "A snapper that size can take off your hand."

"They're also efficient predators of ducklings," he added. "If not overabundant they're an important part of the swamp ecology."

The beast writhed and snapped. Its mean little eyes looked like asterisks on each side of its head. Smith dropped it back into the deep.

We continued back toward the shore. Pulling up next to the box of the first nervous wood duck, Smith gently removed the shirt. The duck stayed inside. As we neared the highway and the schoolyard, the noise of the cars and the children's shouting returned. Our safari was over.

## 1976 environmental awards program

Commissioner Joseph N. Gill of the Department of Environmental Protection (DEP) has announced plans to continue the department's Environmental Awards Program, which was started in 1972.

"In recent months", Gill said, "fiscal pressures have made it more and more necessary for us to rely on individual citizens and private organizations to assist in the tasks of conserving natural resources and improving the quality of our environment. As usual, Connecticut's citizens have responded well."

In an effort to recognize these efforts, the DEP has established guidelines and is seeking nominations for environmental awards in six classifications. Nominations will be reviewed by a panel of outstanding citizens and awards presented when justified.

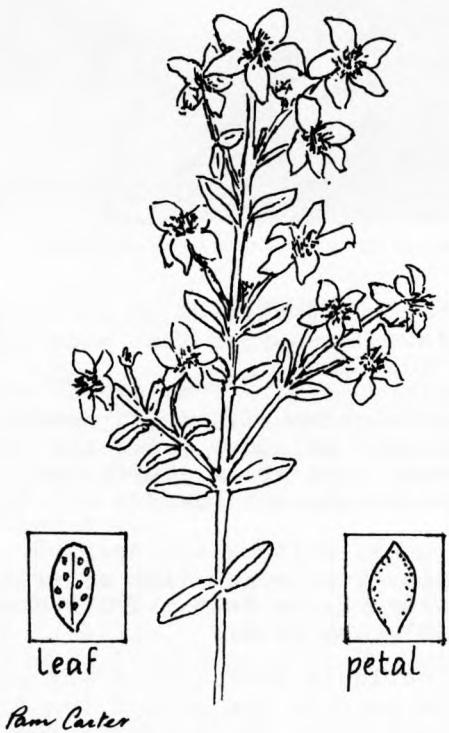
Award classifications to be considered are 1) Community, 2) Citizen, 3) Civic Organizations, 4) Industrial/Commercial, 5) Institution and 6) Student.

A nomination form and fact sheet explaining this award program will be provided to any interested individual or organization by the Information and Education Unit, Connecticut Department of Environmental Protection, State Office Building, Hartford 06115.

# Trailside Botanizing

by G. Winston Carter

COMMON ST. JOHNSWORT  
(*Hypericum perforatum*)



G. Winston Carter

Like many of our common plants, Common St. Johnswort was originally an alien introduced from Europe. It is a frequent

weed of fields, waste places and pastures, where it is difficult to eliminate once it is well established.

This widespread plant is usually about one to one-and-a-half feet tall and can easily be recognized by its five-petaled, bright yellow flowers and paired leaves. However, some of the most intriguing aspects of this plant can best be observed through a hand lens. If you look closely, you will see two identifying features of this plant which would otherwise go unobserved--small black dots on the margin of the petals and tiny translucent dots covering the surface of the leaves. The species name *perforatum* means "having small holes". "Beneath or among the heath" is the translation of the plant's Greek generic name, *Hypericum*, because it frequently grows near members of the heath family. The common name of this plant originated from associating its flowering period in June with St. John's Day, June 24th.

St. Johnswort, of which there are over 200 species, may have more superstitions about it than any plant on record. Common St. Johnswort was considered an effective remedy for melancholia and believed to possess the power to dispel evil spirits. In fact, in former days in Norway and Sweden, it was hung in parlors during June to ward off witches and such spirits. Early physicians praised the quality of an ointment that was made from its blossoms, believed to be helpful in healing wounds.

The hay formed by dried St. Johnswort is sometimes eaten by sheep or cattle but produces adverse effects such as diarrhea and dermatitis.

## Employment Opportunity: Inland Wetlands Officer

The Inland Wetlands and Water Courses Agency of the Town of Greenwich is searching for a qualified individual to fill its newly created position of Inland Wetlands Enforcement Officer. The position will entail professional, technical work in the review and evaluation of inland wetland and watercourse permit applications, the supervision of permit activity and the detection of permit violations.

Applicants for the position should be graduates from a college or university with a bachelor's degree in environmental or related subjects, preferably with two years' experience in an environmental field. An ability to work well with groups such as the Planning and Zoning Commission, Department of Public Works, Department of Parks and Recreation, Department of Environmental Health and the general public is also desirable.

Applicants will be given a qualifying exam, which will be announced upon receipt of the application forms. The deadline for application is July 6, 1976. These forms and further information are available from Harry D. Weathers, Jr., Personnel Officer, Town Hall, Greenwich, Connecticut, 06830, tel.(203)869-8800.

## Department of Planning and Energy Policy:

# P.E.P. TALK

by Tom Richard Strumolo

Newspaper articles, essays, speeches, and all public and private debate on the subject of nuclear-generated electricity are attempts to answer three simple questions:

Do we really need nuclear fission?  
Is it reliable?  
Is it safe?

The following facts and observations should help citizens formulate their own answers.

- Connecticut presently has three nuclear power plants and a fourth to be completed in 1982.
- Connecticut citizens, as a result, are almost 8 times as dependent on nuclear energy as the average American.

• Connecticut's extremely high petroleum dependence has been reduced by the availability of nuclear power. A lack of indigenous sources as well as still-developing technologies preclude the practical reduction of this dependence by natural gas, hydro-power, or solar-generated electricity. Future Connecticut power plants can be expected to be either nuclear or coal-fired.

- Recent changes in electrical consumption suggest that low electrical use in the past few years was as much a function of a slow economy and mild winters as of conservation efforts.

- As of March 1976, the average American nuclear power plant operated at about 58% of its maximum dependence capacity.

- The process of electrical generation requires large amounts of energy. In 1974, 75% of the energy used in generation here in Connecticut was lost either in the conversion process or in transmission.

- Nuclear power has an enviable safety record. There have been no deaths associated with commercial nuclear power while the extraction and utilization of coal claim lives each year. Obviously, though, the chances of an accident occurring at a nuclear plant will increase dramatically if the number of plants in the U.S. triples in the next quarter century.

*Department of Planning and Energy Policy  
Lynn Alan Brooks, Commissioner  
20 Grand Street  
Hartford, Connecticut*



## Conservation Commission Corner

by Gay Ewing

Connecticut Assoc. of  
Conservation Commissions

COLCHESTER--The Conservation Commission has requested the Zoning and Planning Commission to modify its regulations so there will be no wetlands in lots smaller than 30,000 square feet, that 25% of the wetlands be on lots 30,000 to 80,000 square feet, and that 25% be on the two acres surrounding a building if the lot is larger than two acres.

Richard Gariazzo, Chairman of the Conservation Commission, feels that these new regulations would help the Commission in enforcing wetlands regulations.

EAST HADDAM--The Conservation Commission has been informed that a water quality testing program has begun on Bashan Lake, the Moodus Reservoir and Lake Hayward.

The tests conducted by the University of Connecticut with the assistance of a local high school student, will determine the extent of pollution in the three bodies of water.



## DEP Calendar

### Public Hearings June - July, 1976

#### Air Compliance

June 21, 1976 - 2:00 p.m.  
State Office Building - Room 161  
165 Capitol Avenue  
Hartford, Connecticut 06115

Purpose: To request a variance from Section 19-508-22(a)(2) of the Regulations of Connecticut State Agencies to allow the company to operate two marine type steam boilers with emissions of nitrogen oxide in excess of 0.30 pounds per million BTU of heat input.

United Technologies Corp.  
Main Street  
East Hartford, Connecticut

#### Water Compliance

June 17, 1976 - 10:00 a.m.  
122 Washington Street, Room 1  
Hartford, Connecticut

Purpose: To request a permit to discharge 1,000 gallons per day of treated septic tank effluent to the groundwaters of the Ponset Brook Watershed in Haddam.

Barbara Monterosso  
DBA Higganum Music Hall  
c/o A. Monterosso  
Gates Building  
272 Main Street  
New Britain, Connecticut

June 17, 1976 - 11:00 a.m.  
122 Washington Street, Room 1  
Hartford, Connecticut

Purpose: To request a permit to discharge 26,000 gallons per day of subsurface sewage disposal system effluent of the corner of old Waterbury Road and Bucks Hill Road in the Town of Southbury.

Board of Education  
Regional School District #15  
P. O. Box 665  
Middlebury, Connecticut

June 18, 1976 - 10:00 a.m.  
Council Chambers Room at the Municipal Building  
DeKoven Drive and Court Street  
Middletown, Connecticut

Purpose: To request a permit to discharge sanitary sewage and storm water from a proposed horse racing facility.

Sawmill Brook Racing Association, Inc.  
1 Constitution Plaza  
Hartford, Connecticut 06103

June 24, 1976 - 10:00 a.m.  
122 Washington Street, Room 1  
Hartford, Connecticut

Purpose: To request a permit to discharge 15,000 gallons per day of treated metal finishing wastewaters to the Housatonic River.

Bic Pen Corp.  
Milford, Connecticut

#### Water Resources

June 15, 18, & 23, 1976 - 10:00 a.m.  
State Office Building, Room 221  
165 Capitol Avenue  
Hartford, Connecticut

Purpose: To request a permit for filling approximately 277 acres in Ecological Unit 15, Subdivision 1 and to dredge in portions of Lewis Gut and Johnson's Creek in Stratford.

The Stratford Land Improvement Co., Inc.  
(Formerly the Rykar Industrial Corp.)

June 17, 1976 - 10:00 a.m.  
State Office Building, Room 221  
165 Capitol Avenue  
Hartford, Connecticut

Reconvened from April 13.

Michael Schiavone & Sons  
New Haven, Connecticut

June 24, 1976 - 10:00 a.m.  
State Office Building, Room 221  
165 Capitol Avenue  
Hartford, Connecticut

Purpose: To request a permit for the excavation of tidal wetlands.

Reed Newcomb  
c/o Raymond Kotowski  
Westbrook, Connecticut

July 7, 1976 - 10:00 a.m.  
Bedford Junior High School  
170 Riverside Avenue  
Westport, Connecticut

Purpose: To request a permit to construct a residence over the marsh adjacent to Sherwood Mill Pond in Westport.

Mary Jane Wassung  
Westport, Connecticut

## Solid Waste

June 22, 1976 - 10:00 a.m.  
122 Washington Street, Room 1  
Hartford, Connecticut

Purpose: To appeal an order to close the town landfill  
Town of Branford

## Permits Issued May, 1976

### Air Compliance

May 4  
O.Z. Gedney Co.  
Permit to construct and operate a modified sand storage cubicle in Terryville.

May 12  
Dairy Mart Farms, Inc.  
Permit to construct a steam boiler at South Road in Enfield.

May 12  
Dow Chemical, Allyn's Point Plant  
Permit to construct plants and pneumatic conveying systems in Gales Ferry.

May 12  
Pfizer, Inc.  
Renewal of permits to construct a penicillin refining process and solvent recovery process in Groton.

May 12  
R. R. Donnelley & Sons Co.  
Permit to operate a printing press dryer and a catalytic afterburner in Old Saybrook.

May 12  
Uniroyal Chemical  
Permit to operate organic chemical manufacturing equipment in Naugatuck.

May 12  
St. Francis Hospital  
Permit to operate a small incinerator in Hartford.

May 12  
Gabor Ravasz  
Permit to operate a sewage sludge incinerator in Middletown.

May 19  
Allied Chemical Corp.  
Permit to operate two manufacturing operations for the production of driveway sealer and tennis court coatings in Cheshire.

May 19  
Gilbert & Bennet Manufacturing Co.  
Permit to construct and operate a zinc galvanizing operation in Georgeton, Connecticut.

### Water Compliance

May 24  
Nashua Corp.  
Permit to discharge 21,000 gallons a day of photographic wastes into the Enfield sewerage system.

May 24  
Rust-Luck, Inc.  
Permit to discharge 45 gallons per day of wash water into the Danbury sewerage system.

### Water Resources

May 19  
Town of Greenwich  
Permit to enlarge the existing beach at Byram Park on Byram Harbor.

May 27  
William Arnold  
Permit to cross the wetlands bounds in suspending a pipe under a bridge in Greenwich.

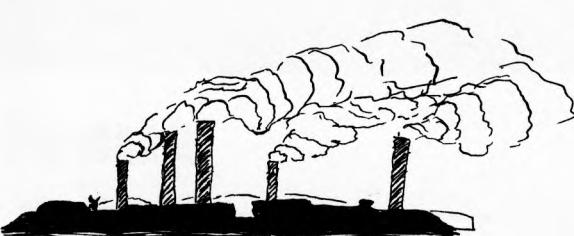
## Permits Denied May, 1976

### Air Compliance

May 12  
Mencuccini Supermarkets, Inc.  
Winsted, Connecticut  
Permit denied to construct and operate an incinerator.

---

NOTICE: Last month the Calendar section reported that the Kerite Co. was denied a permit on April 27 to construct and operate a boiler in Seymour. The company subsequently submitted an amended application and a permit was granted on April 29.





---

## DEP citizens' bulletin

---

State of Connecticut  
Department of Environmental Protection  
State Office Building  
Hartford, Connecticut 06115

Commissioner: Joseph N. Gill  
Director, Info & Ed: Greg Sharp  
Editor: Douglas Starr  
Illustrator: Deborah Dumin

Phone: 566-5524

### PHOTO CREDITS

*covers:* Greg Sharp

*canal scene, page 7:* courtesy of Melvin J. Schneidermeyer

*woodduck banding, page 12:* Doug Starr

Printed by:  
Department of Environmental Protection

SECOND CLASS POSTAGE PAID  
AT HARTFORD, CONNECTICUT.